



#### Newsletter from the Office of the Chief Electrical Inspector

Stephen Thornton, Chief Electrical Inspector

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Question of the Month – Look at the ugly picture on page 2. Assuming the feeder supplying this panel is connected to a 240/120 volt system, and complies with NEC® 200.6 and 200.7, what voltage is being applied to a light fixture supplied by the branch circuit in the pic? See correct answer on Page 2.

# Accomplishments for Year Ending June 30, 2017 – FY17

Increased demand for permits, inspections, plan review, and licensing reflect Washington's continuing economic recovery. Here is what happened in FY17, which demonstrates the amount of work performed by our dedicated staff:

- 92% of the 147,124 electrical permits sold were purchased online.
- 82% of the 240,235 electrical inspection requests made were done online.
- Over 2 million miles were driven reasonably safely.
- System improvements make it possible for near real time inspection results.

### Safety Tip of the Month

When you are driving, nothing is more important than driving. Give your full attention to the road and do not let yourself be distracted by anything. A habit of allowing yourself to be distracted will end in tragedy.

- Inspectors issued 43,401 corrections for serious code violations. These represent about half of total corrections and are violations that could result in disconnection of power if not corrected. By far, property owner permits are most likely to receive serious corrections. At least one serious correction was issued for 50% of property owner inspections, compared to 15% for electrical contractor inspections.
- The economy is improving and our inspection response time declined slightly. For FY17, we responded to approximately 70% of inspections within 24 hours of the date requested and 87% within 48 hours. Unfortunately, this means that 31,422 customers had to wait more than 48 hours for inspection. Number of inspectors and workload affects response times. Before the layoffs of 2009 and 2010, we had 144 inspection staff; now we would have 130 if we could attract qualified applicants for vacant positions. Filling vacant positions and restoring inspectors as the economy improves will be key to improving our response time.
- Our team of dedicated plans examiners reviewed over 8,000 pages of drawings for educational, institutional, or health care facilities to ensure the design for these facilities meets the minimum requirements for electrical safety. The number of pages received represents an increase of about 14% over the previous year. As a result, the average backlog for a set of plans awaiting review in FY17 was 2.6 weeks.
- The correction reduction initiative realized a 25.6% improvement in the number of corrections written to the group of contractors identified as having the most corrections per inspection the previous fiscal year. These contractors receive a list of their corrections each month and are encouraged to use the information to help their electricians improve the quality of their installations. Typically, 20% of contractors receive 80% of corrections.
- 3,557 citations were issued for the focused underground economy. These violations include failing to obtain electrical permits, unlicensed electrical contractors, or uncertified electricians. This represents a decrease from the previous year's 4,172 citations and may be due to increased workload for inspections.
- The licensing section processed 27,231 licenses (contractor, electrician, and trainee applications and renewals). Almost 100% of these were processed the same day they were received.
- Our auditors reviewed affidavits of experience for 1,744,801 electrical trainee and out-of-state experience hours to qualify for electrical certification examinations. Of those, 1,100,178 were denied. Reasons for denial include inability to verify out-of-state experience, lack of or inactive training certificates, lack of proper supervision (sometimes no certified electricians on staff), inability to verify employment (no legal employment records), lack of electrical permits to verify work performed, and lack of valid contractor licensing.

## Why Correction Notices Reference 2017 NEC® and WAC 296-46B

Permits purchased before July 1, 2017 are inspected to the 2014 NEC® and WAC 296-46B. If corrections are noted on these

jobs, the correction notice will reference the 2017 NEC® and WAC 296-46B. This is because the inspection program used by inspectors references what is currently adopted. While these jobs will not have to comply with the 2017 NEC® and WAC 296-46B, it is not likely that a correction for a requirement from the previous code not in the 2017 version would be issued. If a significant code reference change is involved, the inspector can note it as added text in the correction notice. Our approach has always been to work out of the latest code while keeping in mind that we may be looking at installations designed, permitted and installed under previous editions of the NEC®.

### Deadline for Public Input for 2020 National Electrical Code® is Sept 7, 2017

The National Fire Protection Association (NFPA) is accepting public input (proposals) for the 2020 edition of the National Electrical Code® (NEC®) until September 7, 2017. The deadline is nearing, so if you have ideas for improvement to the NEC®, you have only a short time to submit them. Anyone can submit a public input. You may do so online at NFPA's website at this link. Once there, you will need to create a user name and password, which will also allow you to view a read-only copy of the NEC® and other NFPA standards.

## Petition for Rulemaking – 04 Sign Specialty Scope of Work

The department has received a petition from stakeholders to modify the (04) Sign specialty workscope to include energy efficient retrofitting of exterior luminaires that are mounted on a pole or other structure. Current language allows the sign specialty to service, maintain, or repair these luminaires with like-in-kind components, which prohibits modifications such as LED retrofits. The department will begin the formal rulemaking process to consider input from all stakeholders regarding this issue. Watch future editions of this newsletter for more information about how to provide input to the department.

### Correction to the July 2017 Defective PV Module Article

The July 2017 newsletter reported that potentially defective PV modules had been discovered. The article incorrectly reported that Intertek recommended removing the modules from service if they bear the cETLus certification mark with adjacent Control Numbers 3182708 or 4003418. Intertek only recommends removing the modules from service if they show signs of delamination. See the *notification* from Intertek for more information.

# **Corrections to the June 2017 Special Edition Newsletter**

Two paragraphs in the June 2017 Special Edition newsletter, which highlight changes in ground-fault protection and plan review requirements need clarification.

- NEC® 210.8(B) and (E) the title of the paragraph refers to ground-fault protection for personnel "other than dwelling units". We want to clarify that the 210.8(E) requirement for GFCI protection for crawl space lighting outlets applies to all occupancies – including dwelling units.
- WAC 296-46B-900 plan review requirements for electric power production sources. The paragraph incorrectly stated plan review is required for power production sources with a total rating of "9600 watts or more". It should have stated plan review is required for power production sources with a total rating of "more than 9600 watts".

# Contractors – Be Sure Customers Know Inspections Need to Happen

We are finding customers not knowing what they need to know about inspections. Too often, we hear customers who claim, "My electrical contractor never told me I needed an inspection". Some are reluctant to allow access to an inspector.

If everyone knows that an inspection is required and what to expect, inspectors can focus on getting inspections done, which improves response time and reduces delays. Over two-hundred forty thousand electrical inspections were done last year. Probably more inspections will happen this year. Everybody's time is important. Inspections are about safety and everybody needs to work together to get them done. Ultimately, it is the contractor's responsibility to make sure inspectors get access. It is our responsibility to get there in a timely fashion. Together, we can help each other by ensuring customers know access is required and inspection requests include clear access instructions that get inspectors access to inspect.

**Ugly Picture:** Obviously, this installer did not consult the manufacturer's installation instructions (or use common sense)! If viewing this document online, click on the picture to open a larger image.

Answer to Question of the Month: 240 volts. The light bulb would shine very brightly for a very short time.



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